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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,002	01/31/2000	KOJI NAKATA	1776-4054	1376

7590

05/07/2003

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EXAMINER

CHEN, VIVIAN

ART UNIT	PAPER NUMBER
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1773

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DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/485,002

Applicant(s)

NAKATA ET AL.

Examiner

Vivian Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-35, 68 and 69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-35, 68 and 69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. Claims 1-29, 35-67 have been cancelled by Applicant.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/3/2003 has been entered.

Claim Rejections - 35 USC § 103

3. Claims 30-35, 68-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over WNUK ET AL (US 5,391,423) in view of ULLMANN'S ENCYCLOPEDIA OF INDUSTRIAL CHEMISTRY (hereinafter ULLMANN'S).

WNUK ET AL discloses a biodegradable laminate comprising a polycaprolactone core layer surrounded by outer layers of other biodegradable resins such as cellulose esters, polyglycolic acid copolyesters, and/or aliphatic polyester such as polyethylene succinate, and blends of aliphatic polyesters with thermally sensitive polymers such as polycaprolactone (lines 30, col. 9 to line 13, col. 10; lines 14-30, col. 12; column 14; line 54, col. 16 to line 12, col. 17) as recited in claims 30-32, 68 wherein the film layers are coextrudable using conventional

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casting and/or blowing methods (lines 40-50, col. 22) as recited in claim 33. However, the reference does not explicitly disclose oriented films.

ULLMANN'S discloses that it is well known in the art to monoaxially or biaxially orient polymeric films in order to improve and/or optimize mechanical properties, barrier properties, and other physical characteristics, wherein a typical stretch ratio for polyester films is 3:1 to 4:1 as recited in claims 30, 69, wherein such orientation steps are readily incorporated into conventional extrusion and/or film blowing operations. (ULLMANN'S, section 2.3)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to orient the laminate disclosed in WNUK ET AL in order to improve and/or optimize the mechanical, barrier, and other physical properties of the film as taught by ULLMANN'S, and to use the resultant films in known applications where a combination of barrier and/or mechanical properties and biodegradability is deemed desirable, such as in agricultural applications as indicated in claim 35. One of ordinary skill in the art would have utilized known and/or commercially available biodegradable aliphatic polyesters in the outer layers and blends incorporating said polyester (indicated in claim 68) depending on the specific physical properties desired for a given usage. Since it is well known in the art to select the materials used in the various outer and core layers of a laminate to improve the overall mechanical properties of the laminate as a whole and to compensate for the material-specific weaknesses of individual layers, the Examiner has reason to believe that the laminates disclosed in WNUK ET AL are capable of possessing tear strengths superior to those of single material films of comparable thickness as recited in claim 34, therefore the Examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald et al.*, 205 USPQ 594.

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4. Claims 35, 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over WNUK ET AL (US 5,391,423) in view of ULLMANN'S ENCYCLOPEDIA OF INDUSTRIAL CHEMISTRY (hereinafter ULLMANN'S) as applied to claim 30 above, and further in view of KURODA ET AL (US 5,786,408).

WNUK ET AL '423 and ULLMANN'S as relied upon above.

KURODA ET AL discloses that it is well known in the art to use blends of polycaprolactone and aliphatic polyesters such as those derived from succinic acid, adipic acid, and butanediol (lines 58-63, col. 6; line 38, col. 7 to line 14, col. 8) to obtain biodegradable films with good mechanical properties which are suitable for use in conventional biodegradable film applications such as agricultural films.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the blends disclosed in KURODA ET AL in the laminates of WNUK ET AL '423 in order to form strong, useful biodegradable film articles.

Response to Arguments

5. Applicant's arguments filed 3/3/2002 have been considered but are moot in view of the new ground(s) of rejection. ULLMANN's clearly discloses the well known benefits of orienting polymeric films, particularly thermoplastic polyester resin films.

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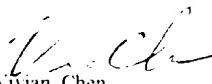
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (703) 305-3551. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 (for non-after finals) and (703) 872-9311 (for after-finals).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

May 2, 2003


Vivian Chen
Primary Examiner
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